APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,813	07/31/2001	Cathy May	AUS920010676US1	4471

7590 04/13/2004		EXAMINER
Duke W. Yee		KIM, KENNETH S

Duke W. Yee
Carstens, Yee & Cahoon, LLP
P.O. Box 802334
Dallas, TX 75380

ART UNIT	PAPER NUMBER
2111	3

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
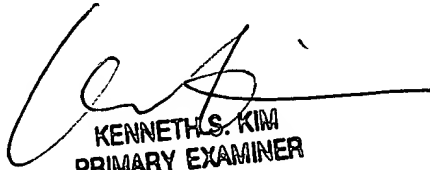THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 July 2001</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-19</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-19</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

KENNETH S. KIM
PRIMARY EXAMINER

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

1.   Claims 1-19 are presented for examination.

2.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the system for modifying computer program instructions comprising a writing component, fetching component, processing component, an overwriting component, refetching component, and reconciliation component must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

        A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4.   Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a)   Claims 1, 8, 13, it is not clear what is a patch class instruction. There is no definition in the specification, although examples, such as NOP, are given.

(b)   Claims 2 and 14, it is not clear how the first instruction is re-fetched and re-executed subsequent to the overwriting to a second instruction.

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   Claims 1-19 are rejected under 35 U.S.C. 102(b) as being anticipated by

Johnston et al, U.S. Patent No. 5,781,776.

        Johnston et al teaches the invention as claimed in claim 1 including a method for

modifying computer program instructions during execution of those instructions (col. 1,

line 10), comprising the steps of:

(a) writing a first value into a memory location (col. 7, line 57), wherein the first value

represents a first instruction, and wherein the first instruction is a patch class instruction

(NOP).

(b) fetching the first instruction from the memory location (col. 7, line 58),

(c) executing the first instruction (col. 7, line 59),

(d) overwriting a second value into the memory location (col. 9, line 60), wherein the

second value represents a second instruction, and wherein the second instruction is a

patch class instruction (LNK),

(e) wherein the overwriting may be concurrent with the execution of the first instruction

(col. 8, line 16; col. 10, lines 1-13), and

        further teaches as in claims 2-7,

(f) re-fetching the first instruction and re-executing the first instruction (done prior to

overwriting) – claim 2,

(g) fetching the second instruction and executing the second instruction (col. 7, line 51) – claim 3,

(h) reconciling a processor's execution pipeline with the memory location, wherein the reconciliation ensures that the second instruction will be fetched and executed from the memory location, if the program subsequently returns to that memory location (flushing pipeline for reconciliation with the memory for self modified code is well known in the art; see Murty et al) – claim 4,

(i) wherein the patch class instruction includes NOP and branch LNK – claim 5,

(j) wherein the steps are implemented in uniprocessor or multiprocessor system (col. 10, line 47) – claims 6 and 7.

The program product claims 8-12 and the system claims 13-19 are equivalently rejected based on the same reason.

7.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gray et al taught a method of repeatedly executing modified test instruction.

Kasper taught a method of patching microcode executed in a processor.

Kaba taught a method of modifying microcode instruction without interrupting the execution of the program.

Mahalingaiah et al taught a method of reconciliation of the pipeline with memory for modified instructions.

Murty et al taught a method of handling modified code conflict in the instruction

fetch pipeline.

Quattromani et al taught a method of identifying modified instructions and

reconciliation of the pipeline with the memory.

8.   Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Kenneth S KIM whose telephone number is (703) 305-
9693. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Mark Rinehart can be reached on (703) 305-4815. The fax phone numbers
for the organization where this application or proceeding is assigned are (703) 872-9306
for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or
proceeding should be directed to the receptionist whose telephone number is (703) 305-
3900.

***

April 7, 2004

KENNETH S. KIM
PRIMARY EXAMINER